

REMARKS

Applicant has carefully studied the outstanding Office Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

The Application as examined included claims 95, 97, 99 – 103, 105 – 119, 122 – 125 and 127 – 137. Claims 1 – 94, 96, 98, 104, 120 – 121 and 126 were previously cancelled. Claims 109, 110, 112 – 119, 125, 127 and 128 were previously withdrawn.

In the present response, the pending claims are maintained.

Rejection under 35 U.S.C. 102(b)

Claims 95, 97, 102, 103, 105, 124, 130, 132 and 134 – 137 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,308,012 (hereinafter "Tobar").

Interview Summary

Applicant expresses appreciation to Examiner Nathan W. Schlientz for the courtesy of an interview, which was granted to Applicant and Applicant's representative, Sanford T. Colb (Reg. No. 26,856). The interview was held in the USPTO on April 28, 2011. The substance of the interview is set forth in the Interview Summary.

At the interview, the differences between Tobar and the present invention were discussed. The Interview Summary states, in relevant part, "it was agreed that the ratio of ammonium sulfamate to hypochlorite disclosed in Tobar is less than the instantly claimed ratio of 1:1. Applicant will provide these arguments in their reply to the Office Action. Upon receipt of Applicant's response the examiner will conduct another search of the art, including species that have not been indicated as allowable. If the examiner deems an interview at that time would further prosecution, he will contact Applicants."

The Examiner stated in the Office Action that Tobar discloses all of the process limitations of claim 95. Pending claim 95 recites "wherein the molar ratio of $[\text{NH}_2\text{R}_3\text{R}_4]^+$ to said hypochlorite is at least 1:1".

This limitation is not disclosed in Tobar as explained below: Tobar discloses that the amount of sulfamic acid "will be from 1 – 30% and preferably 5 – 20% by weight, based on the weight of the available chlorine" (column 1, lines 55 – 57). If, for example, there are 71 g (1 mol) of chlorine, the amount of sulfamic acid will be 0.71 – 21.3 g or 0.0073 – 0.22 mol. Clearly the molar ratio of sulfamic acid to chlorine, and therefore of sulfamic acid to hypochlorite, is less than 1:1. Accordingly, Tobar does not anticipate claim 95 of the present invention.

Claims 97, 102, 103, 105, 124, 130, 132 and 134 – 137 each depends directly or ultimately from claim 95. Therefore, these claims are also not anticipated by Tobar.

Rejection under 35 U.S.C. 103(a)

Claims 95, 97, 99 – 103, 105 – 108, 111, 122 – 124 and 129, 130, 132 and 134 - 137 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tobar in view of U.S. Patent Nos. 5,976,386 and 6,132,628 (hereinafter “Barak”).

Tobar is directed to a method for bleaching wood pulp, while Barak, like the present invention, is directed to a method for controlling microbial growth in a liquid medium, such as process water of a wood pulp processing plant.

Tobar does not show or suggest forming a biocide by mixing a nitrogen-containing compound and a hypochlorite oxidant in a ratio of at least 1:1 as presently claimed. In Tobar the amine compound sulfamic acid is added in a catalytic amount (0.7 – 22 mol% relative to hypochlorite as shown above).

While Barak does disclose a biocide formed from an equimolar mixture of a nitrogen containing compound and a hypochlorite oxidant, a person of skill in the art would not attempt to combine Tobar and Barak, as explained below:

In the bleaching process disclosed in Tobar, the active compound reacts with the wood pulp to bleach it. It is disclosed that adding sulfamic acid results in a brighter pulp. It is stated in Tobar, although not demonstrated, that sulfamic acid can be replaced by a salt such as ammonium sulfamate.

On the contrary, in Barak and in the present invention, the active compound is designed not to react with the wood pulp so that it will be available

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to react with the microbes in the process water. If the process of the present invention was carried out with the active ingredient of Tobar, the active ingredient would be exhausted by bleaching the wood pulp and would not show any antimicrobial activity.

A person of skill in the art would not look to Tobar in order to select an amine compound for use in a process for controlling microbial growth such as the processes of Barak and of the present invention, since the methods described in Tobar and Barak are different in terms of purpose and mechanism. Accordingly, Tobar in view of Barak does not render the present invention obvious.

In view of the foregoing remarks, all of the claims are believed to be in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Respectfully submitted,

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